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SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 11-2QF-16,
VOLUME 1**



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Flying Operations

QF-16 AIRCREW TRAINING

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This volume implements AFD 11-2, *Aircraft Rules and Procedures*; AFD 11-4, *Aviation Service*; and AFI 11-202V1, *Aircrew Training*. It establishes the minimum Air Force standards for training and qualifying personnel performing duties in the QF-16 and operating the QF-16 under remote control. Waiver authority to this publication is established in [paragraph 1.11](#). See [paragraph 1.3](#) for guidance on submitting comments and suggesting improvements. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System (AFRIMS). Contact supporting records managers as required for approval. Copies of MAJCOM/DRU/FOA-level supplements, after approved and published, will be provided by the issuing MAJCOM/DRU/FOA to HQ USAF/A3O-AI, HQ ACC/A3TO, and the user MAJCOM/DRU/FOA offices of primary responsibility. Field units below MAJCOM/DRU/FOA level will forward copies of their supplements to this publication to their parent MAJCOM/DRU/FOA office of primary responsibility for post publication review. **Note:** refer only to those DRUs/FOAs that report directly to HQ USAF. Keep supplements current by complying with AFI 33-360, *Publications and Forms Management*, paragraph 2.15. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route it to MAJCOM/A3, see [paragraph 1.3](#) of this volume for more detailed guidance. This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authorities to collect and or maintain the records prescribed in this publication are *Title 37 United States Code*, Section 301a and *E.O. 9397 (SSN)* as amended by Executive Order 13478, Amendments to Executive Order 9397 Relating to Federal Agency Use of Social Security Numbers, November 18, 2008. **NUMBERING SYSTEM FOR FEDERAL**

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Chapter 1

GENERAL GUIDANCE

1.1. Abbreviations, Acronyms, and Terms: See [Attachment 1](#).

1.2. Responsibilities:

1.2.1. HQ ACC/A3 is designated as the responsible agency for this volume in accordance with (IAW) AFD 11-2, *Aircraft Rules and Procedures*. HQ ACC/A3 will:

1.2.1.1. Chair annual CAF Realistic Training Review Boards (RTRBs) to review ground and flying training requirements/programs for CAF units. RTRB participants will include applicable CAF (active) and ANG and Reserve component representatives. MAJCOM/A3s with major weapons systems for which ACC is lead command will be invited to send representatives and/or inputs.

1.2.1.2. Process all waivers and change requests.

1.2.2. USAFWC will:

1.2.2.1. Determine training requirements to meet expected unit tasking.

1.2.2.2. Submit supplements to HQ USAF/A3O-AI, through HQ ACC/A3TO, for approval before publication. Provide HQ USAF/A3O-AI, HQ ACC/A3TO, and all applicable MAJCOM/A3s a copy of their supplements after publication.

1.2.2.3. Review subordinate unit supplemental instructions and supplemental training programs annually.

1.2.3. The 53rd Weapons Evaluation Group (53 WEG) will: (T-2).

1.2.3.1. Develop programs to ensure training objectives are met. Assist subordinate units in management of training programs, ensure programs meet unit needs, and provide necessary staff support.

1.2.3.2. Review programs and manning position designations annually.

1.2.3.3. If applicable, forward supplements of the instruction and other supporting documents to the 53rd Wing (53 WG) and USAFWC for review. Review supplements annually.

1.2.3.4. Identify and report training shortfalls to ACC/A3T.

1.2.4. Squadron supervision will (T-2):

1.2.4.1. Ensure adequate continuity and supervision of individual training needs, experience, and proficiencies of assigned/attached aircrews.

1.2.4.2. Review training and evaluation records of newly assigned aircrews and those completing training to ensure provisions of this instruction are met.

1.2.4.3. Ensure training scenarios and missions are oriented to conditions anticipated in the unit mission.

1.2.4.4. Review qualifications and training requirements of non-crewmembers and determine appropriate flight restrictions.

1.2.4.5. Report end-of-cycle training deficiencies through channels to HQ ACC/A3TO.

1.2.4.6. Monitor individual assigned/attached aircrew currencies and requirements.

1.2.4.7. Ensure aircrews only participate in sorties, events, and tasks for which they are adequately prepared, trained, and current.

1.2.4.8. Identify the levels of supervision required to accomplish the required training, unless specifically directed.

1.2.5. Individual aircrews will: (T-2).

1.2.5.1. Hand carry all available training records to assist the gaining unit in assessing qualifications and training requirements.

1.2.5.2. Be responsible for completion of training requirements and currencies within the guidelines of this instruction.

1.2.5.3. Ensure they participate only in ground and flying activities for which they are qualified, current and prepared.

1.3. Processing Changes:

1.3.1. Forward waiver requests and recommendations for change to this volume to USAFWC on AF Form 847, *Recommendation for Change of Publication*. Requests for waivers must be submitted through the chain of command to the appropriate Tier waiver approval authority or if a non-Tiered requirement, to the publication OPR for consideration.

1.3.2. USAFWC will forward approved recommendations to HQ ACC/A3.

1.3.3. HQ ACC/A3 will:

1.3.3.1. Process recommendations for changes to this volume to HQ USAF/A3O-AI for HQ USAF/A3 approval.

1.3.3.2. Address time sensitive changes by immediate action message.

1.3.4. USAFWC will determine training requirements for subordinate units. This includes making changes, additions, or deletions to this volume at any time via supplement. HQ ACC/A3 will be an info addressee on all changes. HQ ACC/A3 will include HQ AWFC supplement guidance in the next publication of the AFI.

1.4. Training. Training programs are designed to progress aircrews from Initial Qualification Training (IQT), then to Mission Qualification Training (MQT), and finally to Continuation Training (CT).

1.4.1. **IQT.** IQT provides the training necessary to initially qualify aircrews in a basic position and flying duties without regard to a unit's mission. Upon completion of IQT, the pilots attain Basic Aircraft Qualification (BAQ) status. Pilot BAQ is a prerequisite for MQT.

1.4.2. **MQT.** MQT provides the training necessary to upgrade aircrews to Mission Capable (MC) status. Pilots maintain BAQ status until they complete MQT. Completion of MQT should be completed prior to controller (X-Ray, Yankee, or Tango) qualification training.

1.4.3. **CT.** There are two aspects of CT. The first consists of pilot training in the basic flying skills. These skills ensure safe operation of the aircraft. The second consists of specific mission-related training required to accomplish the unit's assigned missions.

1.4.4. **Ready Aircrew Program (RAP).** N/A

1.4.4.1. **Mission Capable (MC).** MC is defined as the minimum training required for aircrews to be familiarized in all, and may be qualified and proficient in some, of the primary missions tasked to their assigned unit and weapons system.

1.4.4.2. All squadron assigned and attached pilot positions are designated MC positions. The 82 ATRS/CC will determine the level of training and supervision required for each mission flown. (T-3). MC pilots may participate in any mission for which they are proficient and qualified. Failure to complete MC required training results in regression to non-MC (N-MC) status. While N-MC, the 82 ATRS/CC will determine missions the pilot may perform and supervision required. (T-3).

1.4.4.3. **N-MC.** Aircrews that regress to N-MC status will accomplish the requirements in accordance with paragraph [4.6.2](#)

1.4.4.4. **Specialized Training.** Specialized training is training in any special skills necessary to carry out the unit's assigned missions that are not required by every pilot. Specialized training consists of upgrade training such as flight lead upgrade (FLUG), instructor pilot upgrade (IPUG), as well as CT to maintain proficiency and qualification in these capabilities and missions. Specialized training is in addition to MC requirements. Unless otherwise specified, aircrews in MC positions may hold special capabilities/qualifications as long as any additional training requirements are accomplished.

1.5. Training Concepts and Policies:

1.5.1. Units will design training programs to achieve the highest degree of proficiency consistent with flight safety and resource availability. (T-2) Training must balance the need for realism against aircrew/controller capabilities and safety. This instruction provides training guidelines and policies for use with operational procedures specified in applicable flying/operations publications.

1.5.2. The 82 ATRS will develop (T-2) and HQ ACC/A3TO will validate training programs when/where tasked by HQ ACC/A3.

1.5.3. The 82 ATRS will design training missions to achieve proficiency in unit-tasked roles and enhance mission accomplishment and safety. Training missions should emphasize either basic flying skills, safety pilot (SP) skills, or scenarios that reflect procedures and operations based on developmental and operational test requirements. Use of procedures and actions applicable to test scenarios are desired (e.g., adversary tactics, threat reactions, drone maneuvers, remote landings, briefing/debriefing). Tactical training will include the use of adversary tactics, countermeasures, and dissimilar aircraft. It is imperative that full-scale aerial target (FSAT) pilots receive sufficient uncoupled, hands-on flying to achieve a high state of basic transition, aircraft handling, instrument, and formation proficiency. (T-2).

1.5.4. **In-flight Supervision:**

1.5.4.1. Unless specifically directed, the 82 ATRS/CC determines the level of supervision necessary to accomplish the required training. If the mission objectives include introduction to tasks or instruction to correct previous discrepancies, then an instructor may be required.

1.5.4.2. Instructor pilots (IP) and flight lead (FL)-qualified squadron supervisors may allow any pilot to lead limited portions of a mission if appropriately briefed. This provision will only be used to allow the pilot to practice events in which he is already qualified or to help determine if the pilot is ready for upgrade. In either case, the IP or SQ supervisor is responsible for the flight.

1.5.5. Experienced Pilot (EXP) will be:

1.5.5.1. 500 hours F-16, or

1.5.5.2. 300 hours F-16 with 1,000 hours (FP/IP/MP), or

1.5.5.3. 100 hours F-16 and previously fighter experienced.

1.5.6. Fighter time is defined as FP/MP/IP hours logged in aircraft while assigned an AFSC of 11FX.

1.6. Ready Aircrew Program (RAP) Policy and Management. N/A

1.7. RAP Training Development. N/A

1.8. Training Records and Reports:

1.8.1. Units will maintain aircrew records for individual training and evaluations IAW: (T-2).

1.8.1.1. AFI 11-202V1, *Aircrew Training*.

1.8.1.2. AFI 11-202V2, *Aircrew Standardization/Evaluation Program*.

1.8.1.3. AFI 11-401, *Aviation Management*.

1.8.1.4. ACCI 11-464, *Training Records and Performance Evaluation in Formal Flying Training Programs*.

1.8.2. Units will track the following information for all aircrews (as applicable): (T-2).

1.8.2.1. Ground training.

1.8.2.2. Requirements and accomplishments of individual sorties, sortie types, and events cumulatively for the training cycle.

1.8.2.3. Sortie requirements and accomplishment using 1-month and 3-month running totals for look-back.

1.8.2.4. Individual Currencies.

1.8.3. Units will fill in squadron Aviation Resource Management (ARMS) or equivalent with either the date of the last flying training unit (FTU) or USAFWS equivalent training accomplished or the unit mission certification date. (T-2).

1.9. Pilot Utilization Policy:

1.9.1. Commanders will ensure that wing/group active duty (API-1/6s) fill authorized positions IAW unit manning documents and that aircrew status is properly designated. (T-2) The overall objective is that aircrews perform mission related duties. Supervisors may assign aircrews to valid, short-term tasks (escort officer, Flight Evaluation Board/mishap board member, etc.), but must continually weigh the factors involved, such as level of pilot tasking, flying proficiency, currency, and experience. For inexperienced non-supervisory pilots, supervisors will limit the non-flying duties to those related to mission activities to the maximum extent practical. (T-2).

1.9.2. Duties required by various regulations that may be assigned to API-1/6 pilots are weapons and tactics officer, programmer, Flying Safety Officer (FSO), Supervisor of Flying (SOF), mobility/contingency plans, training (except ARMS documentation), SQ Standardization/ Evaluation Liaison Officer (SELO), squadron life support officer, electronic combat officer, and other duties directly related to flying operations. API-1 pilots will not be attached to or man any wing staff position unless wing pilot API-1 manning is over 100 percent. (T-2).

1.10. Sortie Allocation Guidance:

1.10.1. Inexperienced API-1 pilots and inexperienced controllers should receive sortie allocation priority over experienced aircrews.

1.10.2. Priority for sortie allocation should be established by 82 ATRS/CC, to support unit-assigned projects/programs/taskings, IQT/MQT, instructor upgrade, and MC training requirements.

1.10.3. Wing API-6 authorizations are IAW unit manning documents.

1.11. Waiver Authority:

1.11.1. Unless specifically noted otherwise in the appropriate section, the waiver authority is HQ ACC/A3. All waivers will include HQ ACC/A3T as an info addressee. (T-2).

1.11.2. Units will submit a summary of all locally waived requirements. This report will be sent directly to ACC/A3T on or before 31 October of each year. (T-2).

1.11.3. Waivers to this volume will be valid until the approving authority cancels it in writing or revises the publication.

Chapter 2

INITIAL QUALIFICATION TRAINING

2.1. General. This chapter outlines Initial Qualification Training (IQT) of pilots into the QF-16. IQT will be IAW QF-16 IQT approved syllabus or an F-16 SOC course. QF-16 mission qualification requirements are contained in **Chapter 3** and are in addition to basic F-16 qualification.

2.1.1. Successful completion of IQT requires the Upgrading Pilot (UP) to complete an aircraft qualification and instrument evaluation IAW AFI11-2F-16V2.

2.1.2. Training will be completed within the time specified by the syllabus. Failure to complete within the specified time requires notification to the 53 WEG/CC with aircrew name and rank, reason for delay, planned actions, and estimated completion date. (T-3).

2.1.3. Initial/re-qualification flight training for colonel selectees and above requires HQ ACC/A3 approval.

2.2. Approval/Waiver for IQT. IQT may be conducted at the local unit IAW provisions of this chapter. This local IQT will normally be conducted using appropriate formal USAF Transition or Requalification Training Course syllabus tracks, flow programs, and requirements. When local IQT is authorized, the gaining MAJCOM assumes responsibility for the burden of providing this training locally. The following guidance applies only to other than formal course IQT.

2.2.1. MAJCOM/A3 is approval authority to conduct local IQT, and is waiver authority to change the formal requirements of locally conducted IQT. Info MAJCOM/A3T.

2.2.2. MAJCOM/CC is the approval authority for non-formal course IQT for Colonel selectees and above to be conducted at the unit to which the officer is assigned.

2.2.3. Requests to conduct local IQT will include the following: (T-2).

2.2.3.1. Justification for the local training in lieu of formal course training.

2.2.3.2. Summary of individual's flying experience to include last centrifuge training date.

2.2.3.3. Date training will begin and expected completion date.

2.2.3.4. Requested exceptions to formal course syllabus, with rationale.

2.2.4. Successful completion of IQT requires the upgrading pilot to complete an aircraft instrument qualification IAW AFI 11-202V2 (AFI 11-2QF-16V2).

2.3. Prerequisites. IQT prerequisites will be IAW the appropriate formal course syllabus and USAF Education and Training Course Announcements (ETCA). (T-2).

2.4. Ground Training. Ground training may be tailored to the individual's background and experience or peculiar local conditions. However, available and current reference materials such as AFTTP 3-3, AFTTP 3-1.F16, Operational Test Reports and Tactical Bulletins, instructor guides, and audiovisual programs, should be used as supporting materials to the maximum extent possible. Simulator missions will be accomplished in the best simulator available. (T-2).

2.5. Flying Training: (T-2).

2.5.1. Mission sequence and prerequisites will be IAW the appropriate formal course syllabus.

2.5.2. Training will be completed within the time specified by the syllabus, as approved. Failure to complete within the specified time limit requires notification through MAJCOM/A3T to MAJCOM/A3 with pilot's name, rank, reason for delay, planned actions, and estimated completion date.

2.5.3. Pilots in IQT will fly under IP supervision (dual or chased) until completing the instrument qualification checkride.

2.5.4. Formal course syllabus mission objectives and tasks are minimum requirements for IQT. However, additional training events, based on student proficiency and background, may be incorporated into the IQT program with authorization of the 82 ATRS/CC. Additional training due to student non-progression is available within the constraints of the formal course syllabus and may be added at the discretion of the 82 ATRS/CC.

2.6. IQT for Senior Officers: (T-2).

2.6.1. All formal training courses for senior officers (colonel selectees and above) will be conducted at FTUs unless waived IAW [paragraph 2.2](#)

2.6.2. Senior officers must meet course entry prerequisites and will complete all syllabus requirements unless waived IAW syllabus directives and [paragraph 2.2.2](#)

2.6.3. If senior officers must be trained at the base to which they are assigned they will be in formal training status. Unit duties will be turned over to appropriate deputies or vice commanders until training is completed. Exceptions to this policy must be approved by MAJCOM/CC.

Chapter 3

MISSION QUALIFICATION TRAINING

3.1. General. MQT is a training program that upgrades pilots to MC status to accomplish the unit mission. A pilot is considered MC after completing SP-5.

3.1.1. MQT training requirements in this section are for upgrading a QF-16 BAQ pilot to formation flight lead, drone chase (DC), and safety pilot (SP) for captive missions.

3.1.1.1. The SP portion of the MQT program should be individually tailored based on the MQT student's experience especially if previously SP/DC qualified.

3.1.2. MQT entry is at the discretion of the 82 ATRS/CC or Det 1/CC and should be based on the UP's IQT performance.

3.1.3. During academic, ground, and flying training, special emphasis should be placed on remote-control systems and captive flight.

3.1.4. MQT will be completed within 60 calendar days after the individual's start of MQT. Failure to complete within specified time interval requires notification to 53 WEG/CC with aircrew name and rank, reason for delay, planned actions, and estimated completion date. (T-3).

3.1.5. If more than 14 calendar days elapse between sorties, an additional review sortie, designated "P", may be flown at the discretion of 82 ATRS/CC, DO, or Det 1/CC.

3.2. Ground Training. Ground training will consist of academic training, and normal/emergency remote operations in a SIM/CPT or static aircraft. The 82 ATRS/CC will direct QF-16 instructors to develop blocks of instruction covering areas pertinent to the mission. (T-3).

3.3. Flying Training:

3.3.1. Supervision: IP supervision required. (T-3).

3.3.2. Sortie Requirements: SP-1 through SP-5 are mandatory unless UP is a previous SP. The 82 ATRS/CC may waive, in writing, sorties for previously qualified SPs. UP must complete DC-1 regardless if previously qualified as a DC. (T-3).

3.3.2.1. SP-6 is a local orientation sortie for the crossflow of SPs between Tyndall AFB (TAFB) and Holloman AFB (HAFB). SP-6 is optional for previously qualified SPs at the given location.

3.3.2.2. DC-1 and DC-2 (if applicable) must be flown prior to SP-5. (T-3).

3.3.2.3. FLUG-1 must be flown prior to SP-5. Clearance for flight lead duties should be annotated on the gradesheet and updated on the unit LOX as required. (T-3).

3.3.3. LASDT training (SP-4, DC-1, DC-2, FLUG-1): The objective of low/slow speed chase training is to expose pilots to problems associated with intercepting low (below 5000 ft AGL) and slow (less than 250 knots) flying aircraft for chase operations. Emphasis should be placed on intercepting drones at or below 2000 feet AGL and 250 KIAS (either during the takeoff phase, recovery phase, or as a result of battle damage). Emphasis should also be

placed on slow speed maneuvering capabilities at varying gross weights. Training will be conducted IAW AFTTP 3-3 and AFI 11-214. (T-2).

3.3.4. Student non-progression. If a sortie is non-effective for student non-progression, it will be re-flown as an "X" or extra ride and appropriately annotated on the student gradesheet. If more than one X-ride per syllabus sortie is required, the student will be considered for disqualification from the program. 82 ATRS/CC approval is required for flying more than one X-ride per sortie. More than three X-rides flown for student non-progression for the syllabus will result in removal from the course. (T-3).

3.3.5. Upon the successful completion of SP-5, the UP is MC and is qualified as flight lead, drone chase, and SP. Annotate all qualifications on the unit LOXs and the student's gradebook. (T-3).

3.4. MQT Syllabus Missions:

3.4.1. SP-1 Remote Range Procedures.

3.4.1.1. QF-16D (UP/IP).

3.4.1.2. Weather Minimums: UP weather category or 1500/3 if performing ATO/FCS landings.

3.4.1.3. Prerequisites: IAW **paragraphs 3.1 and 3.2**

3.4.1.4. Mission Objectives: Introduce student to Fixed Control Station (FCS) flight profile and remote range operations. Introduce the UP to FCS ground operations and flight characteristics of the QF-16 while under remote control. UP should gain knowledge of typical SP/controller coordination and awareness of what is considered "normal" remote flight characteristics.

3.4.1.5. Mission Requirements: IP brief/debrief. Preflight (including remote control items), auto/manual wiggle, engage in airspace for remote operations to include: high/low speed AAR, type 1 and type 2 maneuvers, 5.0 G slice with G-disconnect, LOC routine, barrel roll with two revolutions, mil power wrap with variable airspeed and bank, G weave for a minimum of two cycles, altitude hold weave for a minimum two cycles. RTB for FCS approaches (both long and short) and touch-and-go landings. This sortie may also include local Area Orientation if UP is not familiar with local area.

3.4.1.6. Minimum Overall Grade: 1 (safe).

3.4.2. SP-2 FCS Formation.

3.4.2.1. QF-16D, QF-16 (UP/IP) (SP)

3.4.2.2. Weather minimums: UP weather category or 1500/3 if performing FCS landings.

3.4.2.3. Prerequisites: SP-1.

3.4.2.4. Mission Objectives: Introduce student to QF-16 two-ship remote operations and slot positions, observe/practice two-ship programmed maneuvers.

3.4.2.5. Mission Requirements: UP brief/debrief of formation items. Preflight (including remote control items). FCS ground operations, UP will lead to the area, drone

slots formation: minimum of one racetrack target pattern, formation weave, 180 degree turn, and slice. Profiles should be flown with UP seeing both lead and wing slots/positions. Split for single-ship RTB for FCS approaches and landings. UP initiated go-around.

3.4.2.6. Minimum Overall Grade: 2 (proficient).

3.4.3. SP-3 SAFE Flight Profile.

3.4.3.1. QF-16D (UP/IP).

3.4.3.2. Weather Minimums: IP weather category or 1500/3 if performing ATO/FCS landings.

3.4.3.3. Prerequisites: SP-1.

3.4.3.4. Mission Objectives: Introduce student to Fixed Control Station (FCS)/Systems Acceptance Flight Evaluation (SAFE) flight profile and remote range operations. Introduce the UP to the flight characteristics of the QF-16 while executing SAFE profile and differing type maneuvers.

3.4.3.5. Mission Requirements: IP brief/debrief. Preflight (including remote control items), ATO (if possible), SAFE profile through all altitude recovery (AAR). Minimum of two of the following maneuvers: barrel roll with two revolutions, wrap with variable airspeed and bank, G weave for a minimum of two cycles, and an altitude hold weave for a minimum two cycles. RTB for FCS approaches and landings as required.

3.4.3.6. Minimum Overall Grade: 2 (proficient).

3.4.4. SP-4 Low Altitude FCS.

3.4.4.1. QF-16D (UP/IP).

3.4.4.2. Weather Minimums: IP weather category or 1500/3 if performing ATO/FCS landings.

3.4.4.3. Prerequisites: SP-3.

3.4.4.4. Mission Objectives: Introduce student to Fixed Control Station (FCS) low altitude flight profile. The objective of this training is to expose pilots to problems associated with remote operations in the low (below 5,000 ft AGL) environment. Demonstrate awareness of flight characteristics of the QF-16 while executing different maneuvers, with emphasis on turn performance at or below 5,000 feet at varying speeds and gross weights under remote control. Introduce drone LOC and AAR performance in the LOWAT environment at varying airspeeds. Training will be conducted IAW AFTTP 3-3 and AFI 11-214. (T-2)

3.4.4.5. Mission Requirements: IP brief/debrief. Preflight (including remote control items), ATO (if possible), low altitude FCS maneuvers. Medium altitude maneuvering to include high/low speed AARs and a minimum of two of the following maneuvers: barrel roll with two revolutions, mil power wrap with variable airspeed and bank, G weave for a minimum of two cycles, Altitude hold weave for a minimum two cycles. RTB for FCS approaches and landings as required. UP initiates go-around.

3.4.4.6. Minimum Overall Grade: 2 (proficient).

3.4.5. DC-1 Drone Chase.

3.4.5.1. QF-16D, QF-16 (UP/IP) (SP).

3.4.5.2. Weather minimums: 1500/3.

3.4.5.3. Prerequisites. Drone Chase academics: 1 hour block focusing on the specifics of drone takeoff, departure, auto-approaches, auto recoveries, LOC routines, destruct modes, and chase techniques. LOWAT event currency.

3.4.5.4. Mission Objectives: Introduce student to DC operations.

3.4.5.5. Mission Requirements: IP brief (chase pickup procedures, drone rejoin/failsafe procedures, FCS pattern procedures and ground references, chase position/techniques) and debrief. Normal ground operations, taxi and takeoff, boat report (Tyndall only), drone pickup, rejoin/fail safe procedures, Battle Damage Assessment (BDA). At least one drone rejoin must be performed with the drone at 1,000 AGL. Recovery to FCS pattern: Alignment and missed approach, loss of carrier demonstration, chase multiple FCS patterns.

3.4.5.6. Minimum Overall Grade: 1 (safe), 2 (proficient, if DC-2 proficiency advanced).

3.4.6. DC-2 Drone Chase.

3.4.6.1. QF-16D, QF-16 (UP/IP) (SP). Drone may be manned or unmanned.

3.4.6.2. Weather minimums. 1500/3 or 2500/5 (If NULLO).

3.4.6.3. Prerequisites. DC-1, LOWAT event currency.

3.4.6.4. Mission Objectives: Complete DC checkout IAW objectives for DC-1.

3.4.6.5. Mission Requirements: UP brief/debrief applicable chase pilot portions. Any items not accomplished on DC-1.

3.4.6.6. Minimum Overall Grade: 2 (proficient). At successful completion of mission, UP will be certified as DC after 82 ATRS/CC or Det 1/CC signs off on gradesheet, annotated on LOX's, and documented in front of gradebook.

3.4.7. FLUG-1 Multi-ship flightlead upgrade.

3.4.7.1. QF-16 x 4 (UP) (IP) (SP) (SP). Minimum of two aircraft (UP) (IP)

3.4.7.2. Weather minimums. VMC in area. Suitable for VFR patterns and landings.

3.4.7.3. Prerequisites. IQT complete, LOWAT event currency.

3.4.7.4. Mission Objectives: Demonstrate proficiency in leading a multi-ship formation and formation low altitude maneuvering. Demonstrate proficiency in single-ship drone rejoin target set up, presentation and maneuvers.

3.4.7.5. Mission Requirements: UP brief/debrief. UP leads departure, area work (medium and low altitude) and recovery.

3.4.7.6. Minimum Overall Grade: 2 (proficient). Upon mission completion, UP will be certified as multi-ship flight lead after 82 ATRS/CC or Det 1/CC signs off on gradesheet, annotated on LOX's, and documented in front of gradebook.

3.4.8. SP-5. SAFETY PILOT MISSION EVALUATION.

3.4.8.1. QF-16D (UP/FE).

3.4.8.2. Weather Minimums: Pilot weather category.

3.4.8.3. Prerequisites: SP-4, DC-2, FLUG-1.

3.4.8.4. Mission Objective: Successfully complete IAW AFI 11-2QF-16 Vol 2. Certify UP as a SP.

3.4.8.5. Mission Requirements. IAW AFI 11-2QF-16 Vol 2.

3.4.8.6. Minimum Overall Grade: IAW AFI 11-2QF-16 Vol 2.

3.4.9. SP-6 SAFE Orientation for TAFB/HAFB Crossflow.

3.4.9.1. QF-16D (UP/IP).

3.4.9.2. Weather minimum: Pilot weather category.

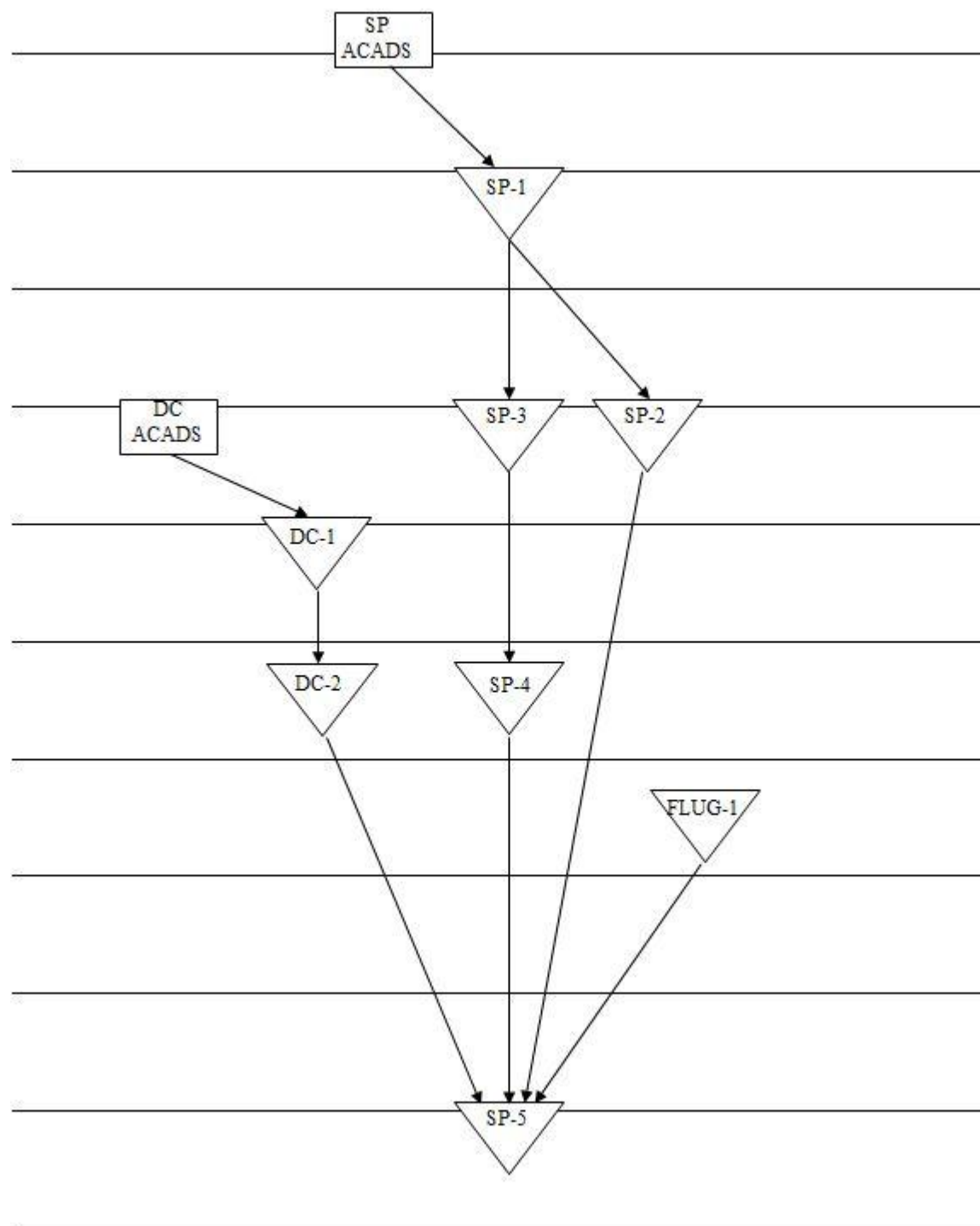
3.4.9.3. Prerequisites: SP-5, SAFE academics/local area academics as applicable.

3.4.9.4. Mission Objective: Orientation at other base.

3.4.9.5. Mission Requirements: (Tyndall Pilots) IP brief, preflight (including remote control items), ATO using Holloman AFB procedures, FCS Pattern orientation and procedures, range orientation and Northrop strip approach, landings as applicable. (Holloman Pilots) IP brief, preflight (including remote control items), ATO using Tyndall AFB procedures, RTB for auto approach, FCS patterns and landings as applicable.

3.4.9.6. Minimum Overall Grade: 2 (proficient).

Figure 3.1. MR Course Map.



Chapter 4

CONTINUATION TRAINING

4.1. General. This chapter outlines annual training requirements for QF-16 aircrews. Refer to **Chapter 6, Specialized Training**, for additional program specifics. Aircrews must be qualified IAW AFI 11-2 QF-16V2, and have completed IQT/MQT as appropriate to be MC, and be eligible to enter continuation training.

4.2. Ground Training. Ground training will be accomplished IAW **Table 4.3**. The table is a single-source reference for MDS-specific ground training only and does not include non-MDS-specific ancillary training. Waiver authority for each event is IAW the reference directive. Where discrepancies exist, the reference directive takes precedence. Ground training accomplished during IQT/MQT may be credited toward CT requirements for the training cycle in which it was accomplished.

4.2.1. Simulator (SIM): QF-16 EP and Mission SIM training requirements will be accomplished in best available simulator. The 82 ATRS/CC will determine the required supervision for CT SIM missions, based on SIM capabilities, and mission training objectives. (T-3). 82 ATRS will develop scenarios that cover both EP and Mission SIM events based on expected employment tasking and general systems knowledge requirements. (T-3). Emphasis should be placed on training not readily attainable during daily flying activities. The 82 ATRS will review scenarios each training cycle and update as required. (T-3).

4.2.1.1. During EP SIM missions, training in the following areas will be accomplished each training cycle: unusual attitude recoveries, spatial disorientation, inadvertent weather entry, controlled flight departure recognition and recovery procedures, controlled and uncontrolled ejection parameters, aircraft subsystem failure checklist procedures, relevant critical action procedures, and precision instrument procedures. (T-2). **NOTE:** Pilots may satisfy EP SIM requirements by accomplishing or administering INSTM/QUAL EP Evaluations (EPEs). **Note:** Mobility Ground Training as well as Chemical Warfare Defense Training, Verification Training, and Intelligence Training do not apply due to the non-combat mission and non-mobility status of QF-16 aircrews.

4.2.2. Situational Emergency Procedures Training (SEPT).

4.2.2.1. This training is not an evaluation but a review of abnormal/emergency procedures and aircraft systems operations/limitations during realistic scenarios. One pilot should present a situation and another should discuss actions necessary to cope with the malfunction and carry it to a logical conclusion. Critical action procedures (if applicable) and squadron special interest items should be emphasized. Incorporate the following elements into squadron SEPT training programs: (T-2).

4.2.2.1.1. 82 ATRS/CC or DO involvement in the selection of SEPT topics.

4.2.2.1.2. Develop SEPT scenarios using F/QF-16 mishaps/incidents.

4.2.2.1.3. Discuss at least two EPs for each phase of flight during the SEPT session.

4.2.2.2. SEPT training will be accomplished each calendar month. (T-2). Failure to accomplish by the end of the month will result in grounding until subsequently

completed. Completion of a simulator EP profile satisfies the monthly SEPT requirement. For an IP/FE administering the SEPT/EP Sim, this will satisfy their SEPT requirement.

4.2.2.3. SEPTs should be accomplished in the best available simulator. Inexperienced pilots require a SIM every 60 days with an IP (120 days for experienced pilots). If a simulator is not available, SEPTs will be accomplished in an en-masse format focusing on realistic scenarios to the maximum extent possible. SEPTs should allow each member to participate to the full extent and share equal time responding to emergency situations. This requirement does not alleviate the requirement for pilots to accomplish SEPTs in a CPT at the rate defined in [Table 4.1](#). This requirement does, however, encourage interaction of SPs/DMCs and controllers to discuss various considerations to different emergency procedures and is therefore the preferred method of SEPT accomplishment.

4.3. Flying Training. All pilots will accomplish the mission and event requirements listed in this instruction. Failure to accomplish these requirements may not affect BAQ or BMC but may require additional training as determined by the 82 ATRS/CC. In addition, the following are required: (T-2).

4.3.1. Basic Aircraft Qualification (BAQ) Requirements:

4.3.1.1. Instrument Qualification Evaluation IAW AFI 11-202V2.

4.3.1.2. Currencies (as applicable) IAW [Table 4.1](#)

4.3.1.3. BAQ pilots will fly a supervised sortie (squadron supervisor or IP) at least once every 60 calendar days. In addition, if a BAQ pilot does not fly for 21 days (inexperienced) or 30 days (experienced), the next sortie must be flown with a squadron supervisor or an IP. (T-2)

4.3.1.4. BAQ pilots that remain in BAQ status for more than 6 months will be grounded (except General Officers), unless currently enrolled in a program to achieve CMR/BMC (waiver authority: MAJCOM/A3). (T-2).

4.4. Special Categories:

4.4.1. Flight Surgeon (FS): (T-2).

4.4.1.1. FSs may fly any missions for which they are fully briefed and prepared. They should fly with an experienced pilot or flight lead. Initial checkouts will be IAW [paragraph 5.3](#)

4.4.1.2. FS flying rates and requirements will be IAW AFI 11-202V1.

4.4.1.3. All SQ flight surgeons assigned to fighter/attack/FAC(A)/FTU are required to complete centrifuge training IAW AFI 11-404, *Centrifuge Training for High-G Aircrew*. During centrifuge training, they will receive instruction on AVTR review.

4.5. Multiple Qualification/Currency:

4.5.1. MAJCOM/A3 may authorize qualification in more than one MDS aircraft for pilots only when such action is directed by command mission requirements and is economically justifiable. This authority cannot be delegated below MAJCOM level. Unless required for

unit mission accomplishment, commanders must not permit pilots qualified in primary mission aircraft to maintain qualification in support aircraft.

4.5.1.1. Submit multiple qualification requests through command channels to MAJCOM/A3. All requests must contain full justification. Approval for a multiple qualification request must be provided to the appropriate host installation aviation management office.

4.5.1.2. Individually authorized multiple qualifications are valid as long as the individual is assigned to the specific position, and aircraft requested, or until rescinded by the approval authority.

4.5.2. Paragraph 4.5.1 does not apply to variants/models of the QF-16. These aircraft are considered the same MDS.

4.5.3. Multiple qualification is not appropriate for senior wing supervisors of units with different types of aircraft. Wing commanders will qualify in only one of their wing's aircraft. (T-2). Either the WG/ CV or OG/CC should qualify in another of the wing's aircraft (not the same one selected by the WG/ CC).

4.5.4. **Multiple Requirements.** Pilots will satisfy at least 50 percent of the sortie requirements of their primary aircraft in that aircraft. They will meet all training sortie/event requirements of the primary aircraft. In addition, pilots will fly an equitable distribution of emergency patterns, instrument sorties, penetrations, non-precision approaches, and precision approaches in each MDS to fill their non-RAP requirements. (T-2).

4.5.5. **Multiple Currencies.** Pilots will fly at least once each 45 days in each aircraft. They will comply with all other currency requirements for each aircraft. (T-2).

4.5.6. Pilots must complete conversion training IAW an approved syllabus. (T-2).

4.6. Currencies/Recurrencies/Requalifications:

4.6.1. **Currency.** Table 4.1, defines currency requirements for all QF-16 pilots. If a pilot loses a particular currency, that sortie/event may not be performed except for the purpose of regaining currency as noted. (T-2).

Table 4.1. Currencies.

PILOT CURRENCIES					
<i>Event</i>	<i>To Update fly:</i>	<i>INEXP</i>	<i>EXP</i>	<i>To regain currency fly:</i>	<i>Notes</i>
AAR	AAR	180	180	Event	2
Demanding Sortie	Any Sortie	21	30	Non-demanding	1
Day Landing	Landing	30	45	Ref 4.6.3.	2
Night Landing	Day/Night Landing	21	30	Day Landing	3
IP RCP Landing	RCP Landing	N/A	90	Event	4
LOWAT	Event	60	90	Event	2, 5
Formation Approach	Event (LD or WG)	120	180	Event	6
Formation Takeoff	Event (LD or WG)	120	180	Event	6

Precision Approach	Event or SIM Event	30	45	Event	7
CT Sortie	Event	60	90	Event	1,2
AHC	Event	45	90	Event	2
FCS Sortie	Event	45	60	Event	2
DC	Event	120	180	Event	2, 5
EP/SEPT SIM	Event	60	120	Event	2
ACBT	ACBT	60	90	Event	6
SFO	Event or SIM event	90	90	Event	

NOTES:

1. Non-demanding sorties are AHC or CT (at or above 1000 feet AGL).
2. Recurrency supervision level is IP in the aircraft or chase, qualified and current in event.
3. Pilots will not perform a night landing unless a day landing has been accomplished within 21 days and a precision approach has been flown within 30 days.
4. IP RCP landing currency is 45 days. IP RCP landing recurrency requires current and qualified pilot in the FCP.
5. LOWAT recurrency requires a LOWAT current and qualified IP/SQ supervisor in the RCP or chase.
6. Recurrency supervision level is a current and qualified IP/ SQ supervisor in the RCP or in the element.
7. IAW AFI 11-202V3.

4.6.2. **Recurrency.** Pilots require additional training if a currency requirement is not met.

4.6.2.1. Pilots must accomplish overdue training requirements as specified by the 82 ATRS/CC before they are considered requalified to perform the task. (T-3).

4.6.2.2. Unless otherwise specified, supervisory requirements pertaining to recurrency may be satisfied in the cockpit or flight position that offers the best control of the mission, as determined by the 82 ATRS/CC.

4.6.3. **Landing Recurrency.** Loss of landing currency requires the following action (timing starts from date of last landing): (T-2).

4.6.3.1. **31-90 Days (46-90 Days--Experienced).** Regain landing currency.

4.6.3.2. **91-135 Days.** Same as **paragraph 4.6.3.1**, plus instructor supervised SIM (normal, instrument, and emergency procedures).

4.6.3.3. **136-210 Days (136-225 for experienced).** Same as **paragraph 4.6.3.2**, plus closed and open book qualification examinations, EPE, and CAPs written examination.

4.6.3.4. **211 (226 for experienced) or More Days.** Requalification training IAW AFI 11-202, Volume 1. Training will include landing recurrency.

4.6.4. **ACBT Recurrency.** Pilots losing currency in ACBT are restricted to limited maneuvering until recur IAW the following paragraphs: (T-2).

4.6.4.1. **61-90 Days (91-120 Experienced).** Supervised aerial target maneuvers to include unlimited maneuvering.

4.6.4.2. **91-180 Days (121-180 Experienced).** Supervised aerial target maneuvers to include unlimited maneuvering. Prior to commencing aerial target unlimited maneuvers, pilot requiring recurrency will accomplish AHC (One Vertical Recovery and one event from the HARTS series IAW AFTTP 3-3.5).

4.6.4.3. **Over 180 Days.** Accomplish a 82 ATRS/CC tailored program.

4.6.5. **Loss of/Requalification to IP Status.** IPs will be decertified for: (T-2).

4.6.5.1. Failure of a flight evaluation. To regain IP status, the IP must successfully complete a flight check IAW AFI 11-202V2.

4.6.5.2. Failure of an INST/QUAL open book test. To regain IP status, the IP must successfully reaccomplish the written exam.

4.6.5.3. RCP Landing. IP rear cockpit landing currency is 90 days.

4.7. Annual Requirements. Annual sortie requirements are found in [Table 4.2](#) Annual ground training requirements and currencies are found in [Table 4.3](#)

Table 4.2. Annual Flying Requirements.

PILOT REQUIREMENTS	MC	Notes
Continuation Training (CT) Sorties	4	
AHC event	4	
FCS Sortie	4	Dedicated
Instrument Penetration	4	
Precision Approach	8	
No HUD Precision Approach	4	
Non-Precision Approach	8	
No HUD Non-Precision Approach	4	
SFO Patterns	8	
Total Sorties	60	

Table 4.3. Annual Ground Training Requirements.

AIRCREW TRAINING				
Subject	Frequency	Directive	Grounding	Affect MC Status
AIRCREW FLIGHT EQUIPMENT CONTINUATION TRAINING (AFECT)				
Local Area Survival Training (LL01)	Initial/PCS	AFI 11-301 V1 as supplemented; AFI 11-202 V1	Yes	Yes
Emergency Egress Training/Ejection Seat (LL02)	12 Months	AFI 11-301 as supplemented	Yes	Yes
Life Support Equipment Training (LL06)	24 Months	AFI 11-301 as supplemented	No	Yes
SERE TRAINING				
Local Area Survival (SS01)	Initial/PCS	AFI 16-1301 as supplemented	No	Yes

Life Support Non Combat Survival Training (SS04)	36 Months	AFI 16-1301 as supplemented	No	Yes
Water Survival (SS31 or SS05)	36 Months	AFI 16-1301 as supplemented	No	Yes
Emergency Parachute Training (SS06)	12 Months	AFI 16-1301 as supplemented	Yes	Yes
GROUND AND PROCEDURAL TRAINING				
SEPT (GS03)	1 Month	AFI F-1611-2QF-16V1	Yes	Yes
Critical Action Procedures (GA02)	Prior to first flight of each month	AFI 11-202 V2 ACC Supp 1	Yes	No
CPT	IAW Table 4.2 this volume	AFI F-1611-2QF-16V1	No	Yes
Instrument Refresher Course (GS06)	Every Fourth Quarter following previous completion date	AFMAN 11-210; AFI 11-202 V1	No	No
Flight Safety Training (GS26)	Quarterly	AFI 91-202	No	No
CRM (GA06)	24 Months	AFI 11-290 as supplemented; AFI 11-202 V1	Yes (WEG/CC waiverable)	Yes
Physiological Refresher Training (PP10)	5 years	AFI 11-403 AFI 11-202 V1	Yes	Yes
Marshalling Exam (GA07)	Within 30 days of PCS and every 24 months thereafter	AFI 11-218 as supplemented	No	No

4.8. End of Cycle Requirements. Pilots who fail to complete mission and/or event requirements of this instruction at the end of the training cycle may require additional training depending on the type and magnitude of the deficiency. Refer to [paragraph 4.9](#) to see if some of these requirements can be prorated. In all cases, report training shortfalls IAW paragraph 1.2.3.4.4.8.1. Pilots failing to meet RAP mission type requirements will result in one of the following:

4.8.1.1. Regress to N-MC if 82 ATRS/CC determines the mission type deficiency is significant. To regain MC the pilot must complete all deficient sortie types. These sorties may count towards total requirements for the new training cycle.

4.8.2. Pilots failing to accomplish sorties required for Special Capabilities/Qualifications will lose their qualification. The SQ/CC will determine requalification requirements. (T-3).

4.9. Proration of End-of-Cycle Requirements. At the end of the training cycle, the 82 ATRS/CC may prorate all training requirements when DNIFs, emergency leaves, Consecutive Overseas Tour (COT) leaves, non-flying TDY/exercises combat/contingency deployments,

(ANG: and or mandatory training required by civilian employment), preclude training for a portion of the training period. Use [Table 4.4](#) to determine proration. Normal leave will not be considered as non-availability. Extended bad weather, which precludes the unit from flying for more than 15 consecutive days may be considered as non-availability. The following guidelines apply:

Table 4.4. Proration Allowance.

CUMULATIVE DAYS OF NON-FLYING	MONTHS OF PRORATION ALLOWED
0 – 15	0
16 – 45	1
46 – 75	2
76 – 105	3
106 – 135	4
136 – 165	5
166 – 195	6
196 – 225	7
226 – 255	8
256 – 285	9
286 – 315	10
316 – 345	11
346 – 375	12

4.9.1. Proration will only be used to adjust for genuine circumstances of training non-availability and not to mask maintenance, training or planning deficiencies.

4.9.2. Proration is based on cumulative days of non-availability for flying in the training cycle. Use [Table 4.4](#) to determine the number of months to be prorated based on the cumulative number of calendar days the pilot was not available for flying during the training cycle.

4.9.3. If IQT or MQT is reaccomplished a pilot's training cycle will start over at a prorated share following completion of IQT/MQT training.

4.10. Instrument Training. (T-2).

4.10.1. Instrument training program will be developed IAW AFM 11-210.

4.10.2. During selected SEPT sessions pilots will review lost wingman procedures, recognition and recovery from spatial disorientation, proper instrument cross-check, and transition from visual to instrument conditions.

4.11. G-Awareness Continuation Training. Units will develop a CT program that provides feedback to pilots and imprints a proper L-1 AGSM so that it becomes an integral part of pulling Gs. (T-2).

4.11.1. The basis of this program is to give each FL, SQ supervisor, flight surgeon and, if available, aerospace physiologist the skills needed to evaluate a flight member's AVTR to ensure a proper AGSM is being performed. This program also makes assessment of the AGSM a normal debrief item after every flight. The assessment should be done as a normal part of AVTR assessment while reviewing other tactical portions of the mission.

4.11.2. Use the following minimum guidance to implement the unit's program: (T-2).

4.11.2.1. AGSM technique and assessment will be incorporated into the squadron CT program. Emphasis will be placed on briefing, debriefing, and assessing the L-1 AGSM using the AVTR in the debrief on a daily basis. FLs, IPs, SQ supervisors, and flight surgeons should become adept at assessing and teaching the correct AGSM. Academics will include a discussion of the limitations imposed on aircraft performance as a result of an ineffective AGSM.

4.11.2.2. The G-awareness exercise will be flown IAW the AFTTP 3-3.F-16 G-Awareness Exercise Procedures per AFI 11-2F-16V3 guidance.

4.11.2.3. FLs will assess the AGSM effectiveness of flight members during mission debriefings. This assessment should not be limited to the G-awareness exercise. Evaluate the AGSM after the pilot has had the time to fatigue to get an accurate assessment of a pilot's AGSM during a tactically and G-demanding portion of flight. AGSM should also be evaluated under relatively low intensity G such as A/S sorties.

4.11.2.4. An A/A mission tape for each pilot will be reviewed each training cycle by the squadron flight surgeon, aerospace physiologist, or a squadron supervisor. The reviews will be documented in the individuals gradebook.

4.11.2.5. FLs or SQ supervisors will identify pilots having poor AGSM technique or low G- tolerance to the Flt/CC or appropriate operations supervisor. The DO or appropriate operations supervisor will determine what action is required to improve the pilot's G-tolerance. The 82 ATRS/CC will determine if refresher training is required IAW AFI 11-404.

Chapter 5

SPECIALIZED TRAINING

5.1. Orientation Flights. Information and procedures for familiarization, incentive, and orientation flights are in AFI 11-401 and ACCI 11-450. Orientation flights will be flown by experienced QF-16 pilots only. (T-2).

5.2. Flight-Lead Upgrade (FLUG). FLUG is normally flown during MQT. After MQT the Squadron CC or designated representative may certify a pilot as multi-ship FL qualified on the unit LOX. If deemed necessary by the SQ/CC, FLUG may be disassociated with MQT. In this case, the SQ/CC must develop, in writing, the applicable program. This will be documented by letter in the UP's training records. (T-3).

5.2.1. The following minimum flying hours are required prior to entering FL upgrade training:

5.2.1.1. 300 hours F-16, or

5.2.1.2. 25 hours F-16 if previously qualified as a 11Fxx AFSC flight lead

5.3. Non-Rated Aircrew Member/ Flight Surgeon Flying Program.

5.3.1. **Ground Training.** Non-rated aircrew members (i.e., flight test engineers) and FSs who are attached to and periodically fly with FSAT units, and who have not previously flown the QF-16, will accomplish the following before the first flight: (T-2).

5.3.1.1. Aircraft general academics with an experienced QF-16 pilot (one-time requirement)

5.3.1.2. Hanging harness/Egress training currency: 90 days for those whose primary assigned aircraft is the QF-16 (60 days for flight surgeons), otherwise 30 days.

5.3.1.3. Emergency procedures review with an experienced QF-16 pilot.

5.3.1.4. Local water survival training (else restricted to over-land flights)

5.3.1.5. Local area survival (one-time)

5.3.1.6. Aircrew life support equipment training (90 days)

5.3.1.7. Altitude chamber physiological training (else restricted to flight below FL 180)

5.3.1.8. Critical Action Procedures examination (emergency ground egress portion only - monthly)

5.3.1.9. Written qualification exam (annual)

5.3.2. **Flight Training.** The first flight in the unit-assigned aircraft will be flown with an experienced QF-16 pilot and may be flown in conjunction with other training sorties. (T-2).

5.3.2.1. FAM-1 QF-16 Familiarization.

5.3.2.1.1. QF-16D (MP/UNR).

5.3.2.1.2. Prerequisites: IAW [paragraph 5.3](#)

5.3.2.1.3. Mission objectives: Introduce the trainee to basic QF-16 handling characteristics and the local flying environment.

5.3.2.1.4. Mission Requirements: MP brief/debrief (emphasis on crew coordination, communications and navigation equipment, instrument interpretation, aircraft performance envelope), single-ship takeoff, transition maneuver demonstrations, basic aircraft control by trainee, local area orientation (emphasis on controlled bailout area location), communication/navigation panel operation, recover for patterns and landings as desired.

5.3.2.1.5. Minimum Overall Grade: 1 (safe).

5.3.3. Currency. Non-rated aircrew member flying currency is 90 days. Loss of currency requires the following:

5.3.3.1. **91-135 Days.** Review emergency procedures with an experienced QF-16 pilot.

5.3.3.2. **135-179 Days.** Same as **paragraph 5.3.3.1**, plus retake the written examination.

5.3.3.3. **180 or More Days:** Repeat events in **5.3.3.1** and **5.3.3.2**

5.4. Instructor Pilot Upgrade (IPUG). 82 ATRS CC/Det 1 CC will select only highly qualified pilots for IPUG and may waive rides based on previous experience. (T-3).

5.4.1. **Ground Training.** Upgrading instructor pilots (UIPs) must satisfactorily demonstrate competency in the following prior to certification as an IP:

5.4.1.1. **Principles of Instruction.** Learning objectives, instructor responsibilities, IP/upgrade pilot relationship, training facilities, and publications.

5.4.1.2. **Techniques of Flight Instruction.** Training objectives and environment, maneuver demonstration, performance and review, recognition and analysis of common pilot errors.

5.4.1.3. **Instructor Responsibility.** Airmanship, judgment, maturity and flight discipline during briefing, in-flight, debrief, and additional squadron duties.

5.4.1.4. **Conduct of Flight Briefing.** Training objectives, order of presentation, use of briefing guides and audiovisual aids, debriefing techniques.

5.4.1.5. **Conduct of Phase Briefings.** Techniques for briefing, use of visual aids, review of applicable phase briefings.

5.4.1.6. **AGSM Techniques.** Briefing, debriefing, and AVTR assessment.

5.4.1.7. **Student Evaluations.** Grading systems and preparation/use of gradesheets.

5.4.2. **Flying Training.** Training will be conducted according to mission outlines listed below. (T-3). IPUG-1 should be flown first and IPUG-6 is flown last. Other sorties may be flown in any sequence except where noted. Accomplishment may be as configuration and scheduling permit.

5.4.2.1. Student non-progression. If a sortie is non-effective for student non-progression, it will be re-flown as an "X" or extra ride and appropriately annotated on the student gradesheet. If more than one X-ride per syllabus sortie is required, the student will be considered for disqualification from the program. 82 ATRS/CC approval is required for

flying more than one X-ride per sortie. Failing to pass a second "X" ride for any particular sortie will result in removal from the course. Failing a total of four "X" rides will result in removal from the course.

5.4.2.2. Mission Objectives: The UIP will demonstrate the ability to properly brief, conduct, reconstruct, and debrief the mission in an instructional fashion. The sortie will be graded against these instructional abilities, not necessarily against the UIP's personal flying skills, except where those skills hamper his instructional ability.

5.4.2.3. Upon successful completion of IPUG-6, the UIP is qualified as a QF-16 IP and certified for normal, remote, LOWAT, and basic ACBT instruction. Annotate this qualification and certifications on the unit LOX.

5.5. IPUG Syllabus Missions.

5.5.1. IPUG-1/2 Transition/Instruments.

5.5.1.1. QF-16D (UIP/IP).

5.5.1.2. Prerequisites: IAW [paragraph 5.4](#) above.

5.5.1.3. Mission Objectives: Introduce UIP to instruction, selected transition/instrument demonstrations, maneuvers, and procedures. Demonstrate proficiency in all items (IPUG-2).

5.5.1.4. Mission Requirements: UIP brief/debrief. SSTO, confidence maneuvers, AHC/HARTS maneuvers, aerobatics, unusual attitude recoveries, instrument approach, touch-and-go landings, SFOs, and VFR pattern and landings. **Note:** If UIP accomplishes all tasks and demonstrates proficiency on IPUG-1, he may be proficiency advanced past IPUG-2

5.5.1.5. Minimum Overall Grade: IPUG-1--1 (safe); IPUG-2--2 (proficient).

5.5.2. IPUG-3 Formation.

5.5.2.1. QF-16D, QF-16 (IP/UIP) (SP).

5.5.2.2. Prerequisites: IPUG-1.

5.5.2.3. Mission Objectives: Demonstrate proficiency in instructing formation. UIP must recognize differing sight pictures between FCP and RCP. Demonstrate proficiency in IP chase techniques/procedures.

5.5.2.4. Mission Requirements: UIP brief/debrief. Formation takeoff (lead), formation departure, formation airwork (administrative and tactical formations), chase in traffic pattern and landing.

5.5.2.5. Minimum Overall Grade: 2 (proficient).

5.5.3. IPUG-4 Remote Operations.

5.5.3.1. QF-16D (IP/UIP).

5.5.3.2. Prerequisites: IPUG-1.

5.5.3.3. Mission Objectives: Demonstrate proficiency in remote-controlled instruction.

5.5.3.4. Mission Requirements: UIP brief/debrief. Takeoff (ATO desired), SAFE or FCS profile, auto recovery and approach, remote-controlled patterns and landings, practice VFR patterns and landings as required. IP must induce an "inadvertent" disengage and UIP must recognize and intervene appropriately.

5.5.3.5. Minimum Overall Grade: 2 (proficient).

5.5.4. IPUG-5 Low Altitude Flight / Remote Operations.

5.5.4.1. QF-16D (IP/UIP).

5.5.4.2. Prerequisites: IPUG-4.

5.5.4.3. Mission Objectives: Demonstrate proficiency in instruction for low altitude QF-16 flight for chase and remote operations.

5.5.4.4. Mission Requirements: UIP brief/debrief. Normal ground operations, takeoff, and departure. UIP will instruct IP through a combined LASDT-1/2 profile. An ATO may be accomplished on this sortie.

5.5.4.5. Minimum Overall Grade: 2 (proficient).

5.5.5. IPUG-6 Instructor Certification.

5.5.5.1. QF-16D (FE/UIP).

5.5.5.2. Prerequisites: IPUG-2, IPUG-3, IPUG-5.

5.5.5.3. Mission Objectives: Complete Initial Instructor Pilot Flight Evaluation IAW AFI 11-2F/QF-16V2 and unit requirements.

5.6. Low Altitude Step Down Training (LASDT). This training is normally conducted as part of IQT and MQT. It may be used to requalify pilots who are significantly out of currency or to train pilots to a lower category.

5.6.1. To conduct low altitude operations safely, pilots need to be knowledgeable of aircraft handling and performance characteristics, tactical formation, intercept, offensive maneuvers, defensive reactions, and navigation. In addition to the tactical environment in which the QF-16 flies, the QF-16 SPs and DC pilots fly in the LOWAT environment at slower than tactical airspeeds, and often under remote control. LOWAT block/category certification is required prior to performing unsupervised operations in that block/category. (T-3).

Table 5.1. LOWAT Categories.

Category	Altitude Block	Upgrade Sorties to Certify
I	5,000 ft -500 ft	LASDT-1, FLUG-1
II	500 ft-100 ft	DC-1/2

5.6.2. MQT pilots will review the manned (remote) operations portions of AFTTP 3-3 paying particular attention to the turn characteristics associated with various types of remote maneuvers and low altitude considerations. (T-3).

5.6.3. MQT pilots will discuss low altitude captive and captive emergency considerations with the IP during the brief. (T-3).

5.7. LASDT Flying Training:

5.7.1. **LASDT-1 (Dual).** Mission Objectives. Demonstrate proficiency in single-ship maneuvering between 5,000 and 1,000 feet AGL. Introduce LOWAT Category I operations. Specific Mission Tasks: AHC IAW AFTTP 3-3.5, LOWAT Series exercises (level turn exercise, turning room demo, acceleration/deceleration exercise, descent awareness training, visual lookout exercise); G-awareness exercise; low level navigation; airspeed control; fuel management; ridge crossings; terrain masking/maneuvering techniques for level/rolling/rough terrain; altitude awareness/control; practice KIOs; defensive reactions; and single-ship low altitude tactical intercepts. In addition, discussion will include task management/prioritization, environmental factors (e.g., sun angle, G-excess illusions/perceptions, use of HUD), and Low Altitude Tactical Navigation (LATN) to include dead reckoning, pilotage, INS use/techniques, use of HUD, etc.

5.7.2. **LASDT-2 (Two-Ship).** Mission Objectives. Demonstrate proficiency in two-ship LOWAT Category I operations. Specific Mission Tasks: G-awareness exercise; low level navigation; fuel management; LATF; ridge crossings; altitude awareness/control; practice KIOs; defensive reactions; weather route abort; two-ship low altitude intercepts. In addition, discussion should focus on formations (e.g., line abreast and wedge), hazards at low altitude, task prioritization, tactical turns, visual lookout/mutual support, range to element mate estimation (sight picture). Upon satisfactory completion of this mission, the SQ/CC can certify the pilot to LOWAT Category I.

5.8. F-16 Block Differences Training. To train between all variants of the F-16, pilots must be current and qualified prior to beginning training. Using AFI11-202 Vol 1 definitions, CCIP aircraft conversion requires differences training only; out-of-cycle checkrides are not required.

5.8.1. **Academics.** Academic instruction should be tailored to the pilot's previous experience and should concentrate on the differences between the two blocks. Instruction should address avionics system, electrical systems, engine differences (as applicable), flight control system differences (as applicable), aircraft handling characteristics (including departure susceptibility), EPs, and cockpit layouts.

5.8.2. **Device Training.** Pilots should receive procedural training as required by previous experience. This training should include systems EPs and CAPs.

5.8.3. **Flying Training.** Block differences training may be conducted during MQT. Pilots who do not require MQT should receive one supervised aircraft sortie. Flight briefing should stress cockpit procedure differences.

5.9. Unlimited Maneuvering Qualification.

5.9.1. AHC-1.

5.9.1.1. QF-16D (UP/IP) or QF-16 (UP), QF-16 (IP).

5.9.1.2. Prerequisites: MQT Checkride.

5.9.1.3. Mission Objectives: Qualify UIP in maneuvers exceeding 180 degrees and increase AHC awareness.

5.9.1.4. Mission Requirements: IP brief/debrief. Formation take-off, confidence maneuvers, AHC maneuvers, unlimited maneuvering from a position of advantage,

unlimited maneuvering from a position of disadvantage, unusual attitude recoveries, pattern and landings, SFOs. **Note:** Upon completion of ride, pilots may provide red air support in excess of 180 degrees. Emphasis should not be on BFM type maneuvers, but instead red air presentations, blue air requests, potential jamming opportunities, etc.

5.9.1.5. Minimum Overall Grade: AHC-1--2 (proficient).

BURTON M. FIELD, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 10-220(I), *Contractor's Flight and Ground Operations*, 1 Mar 2007

AFI 11-2 QF-16V2, *QF-16 Aircrew Evaluation Criteria*, XX Date TBD

AFI 11-2 F/QF-16V3, *F/QF-16 Operations Procedures*, XX Date TBD

AFI 11-202V1, *Aircrew Training*, 22 Nov 2010

AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, 13 Sept 2010

AFI 11-202V3, *General Flight Rules*, 22 Oct 2010

AFI 11-207, *Flight Delivery of Fighter Aircraft*, 13 Sept 2010

AFI 11-290, *Cockpit/Crew Resource Management Training Program*, 15 Oct 2012

AFI 11-301, *Aircrew Flight Equipment (AFE) Program VI*, 25 Feb 2009

AFI 11-401, *Aviation Management*, 10 Dec 2010

AFI 11-403, *Aerospace Physiological Training Program*, 30 Nov 2012

AFI 11-404, *Centrifuge Training for High-G Aircrew*, 28 Oct 2005

AFI 16-402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting and Termination*, 30 May 2013

AFI 16-1301, *Survival, Evasion, Resistance, and Escape (SERE) Program*, 6 Sept 2006

AFI 51-401, *Training and Reporting to Ensure Compliance with LOAC*, 11 Aug 2011

AFI 71-101V2, *Protective Service Matters*, 17 May 2011

AFI 90-201, *The Air Force Inspection System*, 2 Aug 2013

AFI 91-202, *The US Air Force Mishap Prevention Program*, 5 Aug 2011

AFMAN 11-210, *Instrument Refresher Program (IRP)*, 3 Feb 2005

AFMAN 11-217V1, *Instrument Flight Procedures*, 22 Oct 2010

AFMAN 33-363, *Management of Records*, 1 Mar 2008

AFM 171-190 V2, *Air Force Operations Resource Management System*, 6 Jan 1995

AFPD 11-2, *Aircrew Operations*, 19 Jan 2012

AFPD 11-4, *Aviation Service*, 1 Sept 2004

ACCI 11-464, (formerly ACCR50-31), *Training Records and Performance Evaluation in Formal Flying Training Programs*, 13 Mar 2013

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

A/A—Air to Air

AAR—All Attitude Recovery

ACBT—Air Combat Tactics

ACC—Air Combat Command

AFI—Air Force Instruction

AFSC—Air Force Specialty Code

AGL—Above Ground Level

AGSM—Anti-G Straining Maneuver

AHC—Advanced Handling Characteristics

AOA—Angle of Attack

API—Aircrew Position Indicator

ARMS—Air Force Operations Resource Management System

ATO—Automatic Takeoff

ATRS—Aerial Targets Squadron

AVTR—Airborne Video Tape Recorder

BAQ—Basic Aircraft Qualification

BDA—Battle Damage Assessment

BMC—Basic Mission Capable

CAF—Combat Air Forces

CC—Commander

CFT—Cockpit Familiarization Trainer

CPT—Cockpit Procedures Trainer

CRM—Cockpit Resource Management

CT—Continuation Training

DC—Drone Chase

DFCS—Drone Formation Control System (HAFB)

DMC—Drone Mission Commander

DNIF—Duty Not Involving Flying

EP—Emergency Procedure

EPE—Emergency Procedures Evaluation

EPT—Emergency Procedures Training

EXP—Experienced
FCP—Front Cockpit
FCS—Fixed Control Site (e.g. GRDCS and DFCS)
FE—Flight Examiner
FL—Flight Lead
FLUG—Flight Lead Upgrade
FP—First Pilot
FS—Flight Surgeon
FSAT—Full- Scale Aerial Target
FTU—Formal Training Unit
G—Gravitational Load Factor, 32.2 feet per second squared
GRDCS—Gulf Range Drone Control System (TAFB)
HAFB—Holloman AFB, NM
HQ—Headquarters
IAW—In Accordance With
IC—Instructor Controller
IFR—Instrument Flight Rules
INEXP—Inexperienced
INST/QUAL—Instrument/Qualification
IP—Instructor Pilot
IPUG—Instructor Pilot Upgrade
IQT—Initial Qualification Training
LASDT—Low Altitude Step-down Training
LOC—Loss of Carrier
LOWAT—Low Altitude Awareness Training
LOX—Letter of Xs
MAJCOM—Major Command
MC—Mission Capable
MCS—Mobile Control System
MDS—Mission Design Series
MP—Mission Pilot
MQT—Mission Qualification Training

NULLO—Not Under Live Local Operator

OPR—Office of Primary Responsibility

P—Pilot

PAI—Primary Aircraft Inventory

PQI—Professional Qualification Index (AFPD 11-4 and AFI 11-401)

RAP—Ready Aircrew Program

RCP—Rear Cockpit

RTB—Return to Base

RTRB—Realistic Training Review Board

SAFE—System Acceptance Flight Evaluation

SEFE—Stan/Eval Flight Examiner

SELO—Stan/Eval Liaison Officer

SEPT—Situational Emergency Procedures Training

SOF—Supervisor of Flying

SP—Safety Pilot

SQ—Squadron

SQ/CC—Squadron Commander

TAFB—Tyndall AFB, FL

TDY—Temporary Duty

TR—Transition (initial QF-16 qualification)

UIP—Upgrading Instructor Pilot

UP—Upgrading Pilot

USAFWC—United States Air Force Warfare Center

USAFWS—United States Air Force Weapons School

VFR—Visual Flight Rules

VMC—Visual Meteorological Conditions

WEG—Weapons Evaluation Group

WG—Wing

Terms

Advanced Handling Characteristics (AHC)—A series of maneuvers designed to acquaint the pilot with handling characteristic at near maximum performance. These include rudder reversals, break turns, minimum time turns, optimum turns, high speed dive recoveries and acceleration maneuvers.

Cockpit Procedures Trainer (CPT)—A training device in which the controls, switches, and instruments do not have to respond to trainee inputs. Used for checklist use, normal procedures, and emergency procedures (see AFPAM 36-2211).

Confidence Maneuvers—A series of maneuvers that demonstrate the low speed characteristics of the aircraft at both low and high AOA.

Continuation Training (CT)—Training to maintain proficiency and improve pilot capabilities to perform unit missions and pilot proficiency sorties not flown in formal syllabus missions, tests, or evaluations.

Currency—The minimum frequency required to perform an event or sortie safely.

Demanding Sortie—Sorties that task the aircrew to the extent that flying frequency and continuity are most critical. Included are LOWAT (below 1000 feet AGL), instructor duties, drone chase and MCS sorties.

Drone Chase Mission—Mission flown in support of a remotely-controlled Full Scale Aerial Target (manned or NULLO).

Emergency Procedures Evaluation—An evaluation of aircrew knowledge and responsiveness to critical and non-critical EPs conducted by a SEFE in an CFT or aircraft cockpit.

Experienced Aircrew—For IQT entry purposes: 1000 FP/MP/IP hours in high performance fighter or AT/T-38 Instructor hours with 53 WEG/CC approval. For CT currency purposes: IQT/MQT complete and: 500 F/QF-16 FP/MP/IP hours, or 1000 total hours plus 200 F/QF-16 hours, or 600 total hours plus 300 F/QF-16 hours, or previously fighter experienced plus 100 QF-16 hours.

Flight Lead (FL)—As designated on flight orders, the individual responsible for overall conduct of mission from preflight preparation/briefing to post-flight debriefing, regardless of actual position within the formation. A certified four-ship FL may lead formations and missions in excess of four aircraft, unless restricted by the unit CC. A two-ship FL is authorized to lead an element in a larger formation.

Initial Qualification Training (IQT)—Training to qualify the aircrew in basic aircraft flying duties without specific regard to the unit's operational mission. The minimum requirement for mission-support status.

Mission Capable (MC)—A status of an aircrew member who has satisfactorily completed training prescribed to perform the unit mission.

Mission Qualification Training (MQT)—Training required to achieve a basic level of competence in unit's primary tasked missions.

Non-demanding Sortie—A day sortie that provides the aircrew with opportunity to regain basic flying proficiency without excessively tasking those skills that have been under used during the non-flying period. Non-demanding sorties are instruments, AHC, and low-level navigation at or above 1000 feet AGL.

Not Under Live Local Operator (NULLO)—An FSAT drone flown without a pilot on board.

Pilot Qualification Index (PQI)—AFPD 11-4 and AFI 11-401 index used to identify aircrews who fail to complete basic training minimums and requirements that have not been waived.

Primary Aircraft Inventory (PAI)—Aircraft authorized for performance of the operational mission. The PAI forms the basis for allocation of operating resources to include manpower, support equipment, and flying-hour funds. The operating command determines the PAI required to meet their assigned missions. (See AFI 16-402.)

Proficiency—Demonstrated ability to successfully accomplish tasked event safely and effectively. For purposes of this regulation, proficiency also requires currency in the event, if applicable.

Situational Emergency Procedures Training (SEPT)—A discussion and review of abnormal/emergency procedures and aircraft systems operations/limitations based on realistic scenarios.

Specialized Training—Training in specialized systems or flight responsibilities such as flight lead or instructor. This training may be conducted in MQT or CT, as required.

Squadron Supervisor—Squadron Commander, Operations/Assistant Operations Officers, Flight Commanders, and contractor equivalents.